

## SEQUENCE LISTING

<110> Warner-Lambert Company LLC  
 Bove, Susan R  
 Kilgore, Kenneth

<120> Methods of Treating Osteoarthritis with IL-6 Antagonists

<130> PC32145A

<150> 60/543,814  
 <151> 2004-02-11

<160> 12

<170> PatentIn version 3.3

<210> 1  
 <211> 636

<212> DNA  
 <213> Mus musculus

<400> 1  
 atgaagttcc tctctgcaag agacttccat ccagttgcct tcttggact gatgctggtg 60  
 acaaccacgg ccttccctac ttcacaagtc cggagaggag acttcacaga ggataccact 120  
 cccaacacagac ctgtctatac cacttcacaa gtcggaggct taattacaca tggatctgg 180  
 gaaatcgtgg aaatgagaaa agagttgtgc aatggcaatt ctgattgtat gaacaacgat 240  
 gatgcacttg cagaaaaacaa tctgaaaactt ccagagatac aaagaaaatga tggatgctac 300  
 caaactggat ataatcagga aatttgccta ttgaaaattt cctctggct tctggagtac 360  
 catagctacc tggagtacat gaagaacaac ttaaaagata acaagaaaaga caaagccaga 420  
 gtccttcaga gagatacaga aactctaatt catatcttca accaagaggt aaaagattta 480  
 cataaaatag tccttcctac cccaatttcc aatgctctcc taacagataa gctggagtca 540  
 cagaaggagt ggctaaggac caagaccatc caattcatct tgaaatcact tgaagaattt 600  
 ctaaaagtca ctttgagatc tactcggcaa acctag 636

<210> 2  
 <211> 211  
 <212> PRT  
 <213> Mus musculus

<400> 2

Met Lys Phe Leu Ser Ala Arg Asp Phe His Pro Val Ala Phe Leu Gly  
 1 5 10 15

Leu Met Leu Val Thr Thr Ala Phe Pro Thr Ser Gln Val Arg Arg  
 20 25 30

Gly Asp Phe Thr Glu Asp Thr Thr Pro Asn Arg Pro Val Tyr Thr Thr  
 35 40 45

Ser Gln Val Gly Gly Leu Ile Thr His Val Leu Trp Glu Ile Val Glu  
50 55 60

Met Arg Lys Glu Leu Cys Asn Gly Asn Ser Asp Cys Met Asn Asn Asp  
65 70 75 80

Asp Ala Leu Ala Glu Asn Asn Leu Lys Leu Pro Glu Ile Gln Arg Asn  
85 90 95

Asp Gly Cys Tyr Gln Thr Gly Tyr Asn Gln Glu Ile Cys Leu Leu Lys  
100 105 110

Ile Ser Ser Gly Leu Leu Glu Tyr His Ser Tyr Leu Glu Tyr Met Lys  
115 120 125

Asn Asn Leu Lys Asp Asn Lys Lys Asp Lys Ala Arg Val Leu Gln Arg  
130 135 140

Asp Thr Glu Thr Leu Ile His Ile Phe Asn Gln Glu Val Lys Asp Leu  
145 150 155 160

His Lys Ile Val Leu Pro Thr Pro Ile Ser Asn Ala Leu Leu Thr Asp  
165 170 175

Lys Leu Glu Ser Gln Lys Glu Trp Leu Arg Thr Lys Thr Ile Gln Phe  
180 185 190

Ile Leu Lys Ser Leu Glu Glu Phe Leu Lys Val Thr Leu Arg Ser Thr  
195 200 205

Arg Gln Thr  
210

<210> 3  
<211> 636  
<212> DNA  
<213> Rattus norvegicus

<400> 3 atgaaggttc tctccgcaag agacttccag ccagttgcct tcttggact gatgttgtg 60  
acagccactg ccttccctac ttcacaagtc cgagaggag acttcacaga ggataccacc 120  
cacaacagac cagtatatac cacttcacaa gtcggaggct taattacata tgttctcagg 180  
gagatcttgg aaatgagaaa agagttgtgc aatggcaatt ctgattgtat gaacagcgat 240  
gatgcactgt cagaaaaacaa tctgaaactt ccagaaatac aaagaaaatga tggatgcttc 300  
caaactggat ataaccagga aatttgccta ttgaaaatct gctctggtct tctggagttc 360

cgtttctacc	tggagtttgt	gaagaacaac	ttacaagata	acaagaaaga	caaagccaga	420
gtcattcaga	gcaatactga	aaccctagtt	catacttca	aacaagagat	aaaagactca	480
tataaaatag	tccttcctac	cccaacttcc	aatgctctcc	taatggagaa	gttagagtca	540
cagaaggagt	ggctaaggac	caagaccatc	caactcatct	tgaaagcact	tgaagaattt	600
ctaaagggtca	ctatgagggtc	tactcgcaa	acctag			636

<210> 4

<211> 211

<212> PRT

<213> Rattus norvegicus

<400> 4

Met	Lys	Phe	Leu	Ser	Ala	Arg	Asp	Phe	Gln	Pro	Val	Ala	Phe	Leu	Gly
1				5				10				15			

Leu	Met	Leu	Leu	Thr	Ala	Thr	Ala	Phe	Pro	Thr	Ser	Gln	Val	Arg	Arg
				20				25				30			

Gly	Asp	Phe	Thr	Glu	Asp	Thr	Thr	His	Asn	Arg	Pro	Val	Tyr	Thr	Thr
	35				40						45				

Ser	Gln	Val	Gly	Gly	Leu	Ile	Thr	Tyr	Val	Leu	Arg	Glu	Ile	Leu	Glu
	50				55					60					

Met	Arg	Lys	Glu	Leu	Cys	Asn	Gly	Asn	Ser	Asp	Cys	Met	Asn	Ser	Asp
65				70				75				80			

Asp	Ala	Leu	Ser	Glu	Asn	Asn	Leu	Lys	Leu	Pro	Glu	Ile	Gln	Arg	Asn
				85				90				95			

Asp	Gly	Cys	Phe	Gln	Thr	Gly	Tyr	Asn	Gln	Glu	Ile	Cys	Leu	Leu	Lys
		100					105					110			

Ile	Cys	Ser	Gly	Leu	Leu	Glu	Phe	Arg	Phe	Tyr	Leu	Glu	Phe	Val	Lys
		115				120					125				

Asn	Asn	Leu	Gln	Asp	Asn	Lys	Lys	Asp	Lys	Ala	Arg	Val	Ile	Gln	Ser
					130					135			140		

Asn	Thr	Glu	Thr	Leu	Val	His	Ile	Phe	Lys	Gln	Glu	Ile	Lys	Asp	Ser
145					150				155			160			

Tyr	Lys	Ile	Val	Leu	Pro	Thr	Pro	Thr	Ser	Asn	Ala	Leu	Leu	Met	Glu
					165			170				175			

Lys Leu Glu Ser Gln Lys Glu Trp Leu Arg Thr Lys Thr Ile Gln Leu  
 180 185 190

Ile Leu Lys Ala Leu Glu Glu Phe Leu Lys Val Thr Met Arg Ser Thr  
 195 200 205

Arg Gln Thr  
 210

<210> 5  
 <211> 639  
 <212> DNA  
 <213> Human

<400> 5		
atgaactcct tctccacaag cgccttcggc ccagttgcct tctccctggg gctgctcctg	60	
gtgttgccctg ctgccttccc tgccccagta ccccccaggag aagattccaa agatgttagcc	120	
gccccacacaca gacagccact cacctttca gaacgaattt acaaacaat tcggtacatc	180	
ctcgacggca tctcagccct gagaaaggag acatgttaaca agagtaacat gtgtgaaagc	240	
agcaaagagg cactggcaga aaacaacctg aaccttccaa agatggctga aaaagatgga	300	
tgcttccaat ctggattcaa tgaggagact tgcctggtga aaatcatcac tggtctttg	360	
gagtttggagg tatacctaga gtacccctcag aacagattt agagtagtga ggaacaagcc	420	
agagctgtgc agatgagtac aaaagtccctg atccagttcc tgcagaaaaa ggcaaaagaat	480	
ctagatgcaa taaccacccc tgacccaacc acaaatgcc agcctgctgac gaagctgcag	540	
gcacagaacc agtggctgca ggacatgaca actcatctca ttctgcgcag ctttaaggag	600	
ttcctgcagt ccagcctgag ggctttcgg caaatgtag	639	

<210> 6  
 <211> 212  
 <212> PRT  
 <213> Human

<400> 6

Met Asn Ser Phe Ser Thr Ser Ala Phe Gly Pro Val Ala Phe Ser Leu  
 1 5 10 15

Gly Leu Leu Leu Val Leu Pro Ala Ala Phe Pro Ala Pro Val Pro Pro  
 20 25 30

Gly Glu Asp Ser Lys Asp Val Ala Ala Pro His Arg Gln Pro Leu Thr  
 35 40 45

Ser Ser Glu Arg Ile Asp Lys Gln Ile Arg Tyr Ile Leu Asp Gly Ile  
 50 55 60

Ser Ala Leu Arg Lys Glu Thr Cys Asn Lys Ser Asn Met Cys Glu Ser  
65 70 75 80

Ser Lys Glu Ala Leu Ala Glu Asn Asn Leu Asn Leu Pro Lys Met Ala  
85 90 95

Glu Lys Asp Gly Cys Phe Gln Ser Gly Phe Asn Glu Glu Thr Cys Leu  
100 105 110

Val Lys Ile Ile Thr Gly Leu Leu Glu Phe Glu Val Tyr Leu Glu Tyr  
115 120 125

Leu Gln Asn Arg Phe Glu Ser Ser Glu Glu Gln Ala Arg Ala Val Gln  
130 135 140

Met Ser Thr Lys Val Leu Ile Gln Phe Leu Gln Lys Lys Ala Lys Asn  
145 150 155 160

Leu Asp Ala Ile Thr Thr Pro Asp Pro Thr Thr Asn Ala Ser Leu Leu  
165 170 175

Thr Lys Leu Gln Ala Gln Asn Gln Trp Leu Gln Asp Met Thr Thr His  
180 185 190

Leu Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser Ser Leu Arg Ala  
195 200 205

Leu Arg Gln Met  
210

<210> 7

<211> 1323

<212> DNA

<213> Mus musculus

<400> 7

atgctgaccg tcggctgcac gctgttggtc gccctgctgg ccgcgcggc ggtcgcgctg 60

gtcctcgaaa gctgccgcgc gctggaggtg gcaaatggca cagtgacaag cctgccagg 120

gccaccgtta ccctgatttg ccccggaaag gaagcagcag gcaatgttac cattcactgg 180

gtgtactctg gctcacaaaa cagagaatgg actaccacag gaaacacact ggttctgagg 240

gacgtgcagc tcagcgacac tggggactat ttatgctccc tgaatgatca cctgggtggg 300

actgtccct tgctggtgga tgttccccca gaggagccca agctctcctg cttccggaag 360

aaccccttg tcaacgccc tctgtgatgg cgtccgagca gcacccctc tccaaccacg 420

aaggctgtgc tgtttgcaaa gaaaatcaac accaccaacg ggaagagtga cttccaggtg 480

ccctgccagt attctcagca gctgaaaagc ttctcctgcc aggtggagat cctggagggt	540
gacaaagtat accacatagt gtcactgtgc gttgcaaaca gtgtgggaag caagtccagc	600
cacaacgaag cgtttcacag cttaaaaatg gtgcagccgg atccacctgc caacacctgt	660
gtatcagcca tacctggaag gccgcgctgg ctcaaagtca gctggcagca ccctgagacc	720
tgggacccga gttactactt gctcagttc cagcttcgat accgacctgt atggtcaaag	780
gagttcacgg tggctgctgct cccgggtggcc cagtaccaat gcgtcatcca tgatgccttg	840
cgaggagtga agcacgtggt ccaggtccgt gggaggagg agcttgacct tggccagtgg	900
agtgaatggt ccccagaggt cacgggcaact ccttggatag cagagcccaag gaccaccccg	960
gcaggaatcc tctggAACCC cacacaggc tctgttgaag actctgccaa ccacgaggat	1020
cagtacaaa gttctacaga agcaacgagt gtcctcgccc cagtgcaga atcctcggtcc	1080
atgtccctgc ccacattcct ggtagctgga ggaagcttgg cgtttgggtt gcttctctgt	1140
gtcttcatca tcctgtgttg ggagccgcgc ccacattcgc cgttacaaga tggcgctgac	1200
agctgtgttc taagtggtaa acaaataatc tgcgcatgtg ccgagggtgg ttctccactc	1260
catgtgctct gccttccccg tgacgtcaac tcggccgatg ggctgcagcc aatcagggag	1320
tga	1323

&lt;210&gt; 8

&lt;211&gt; 364

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 8

Met Leu Thr Val Gly Cys Thr Leu Leu Val Ala Leu Leu Ala Ala Pro			
1	5	10	15

Ala Val Ala Leu Val Leu Gly Ser Cys Arg Ala Leu Glu Val Ala Asn		
20	25	30

Gly Thr Val Thr Ser Leu Pro Gly Ala Thr Val Thr Leu Ile Cys Pro		
35	40	45

Gly Lys Glu Ala Ala Gly Asn Val Thr Ile His Trp Val Tyr Ser Gly		
50	55	60

Ser Gln Asn Arg Glu Trp Thr Thr Gly Asn Thr Leu Val Leu Arg			
65	70	75	80

Asp Val Gln Leu Ser Asp Thr Gly Asp Tyr Leu Cys Ser Leu Asn Asp		
85	90	95

His Leu Val Gly Thr Val Pro Leu Leu Val Asp Val Pro Pro Glu Glu

100

105

110

Pro Lys Leu Ser Cys Phe Arg Lys Asn Pro Leu Val Asn Ala Ile Cys  
 115 120 125

Glu Trp Arg Pro Ser Ser Thr Pro Ser Pro Thr Thr Lys Ala Val Leu  
 130 135 140

Phe Ala Lys Lys Ile Asn Thr Thr Asn Gly Lys Ser Asp Phe Gln Val  
 145 150 155 160

Pro Cys Gln Tyr Ser Gln Gln Leu Lys Ser Phe Ser Cys Gln Val Glu  
 165 170 175

Ile Leu Glu Gly Asp Lys Val Tyr His Ile Val Ser Leu Cys Val Ala  
 180 185 190

Asn Ser Val Gly Ser Lys Ser Ser His Asn Glu Ala Phe His Ser Leu  
 195 200 205

Lys Met Val Gln Pro Asp Pro Pro Ala Asn Leu Val Val Ser Ala Ile  
 210 215 220

Pro Gly Arg Pro Arg Trp Leu Lys Val Ser Trp Gln His Pro Glu Thr  
 225 230 235 240

Trp Asp Pro Ser Tyr Tyr Leu Leu Gln Phe Gln Leu Arg Tyr Arg Pro  
 245 250 255

Val Trp Ser Lys Glu Phe Thr Val Leu Leu Leu Pro Val Ala Gln Tyr  
 260 265 270

Gln Cys Val Ile His Asp Ala Leu Arg Gly Val Lys His Val Val Gln  
 275 280 285

Val Arg Gly Lys Glu Glu Leu Asp Leu Gly Gln Trp Ser Glu Trp Ser  
 290 295 300

Pro Glu Val Thr Gly Thr Pro Trp Ile Ala Glu Pro Arg Thr Thr Pro  
 305 310 315 320

Ala Gly Ile Leu Trp Asn Pro Thr Gln Val Ser Val Glu Asp Ser Ala  
 325 330 335

Asn His Glu Asp Gln Tyr Glu Ser Ser Thr Glu Ala Thr Ser Val Leu  
 340 345 350

Ala Pro Val Gln Glu Ser Ser Ser Met Ser Leu Pro  
355 360

```

<210> 9
<211> 1389
<212> DNA
<213> Rattus norvegicus

<400> 9
atgctggccg tcggctgcac cctgctggtc gccctgctgg ccgcgcggc agtcgcgctg 60
gtccttggga gctgccgcg gctggaggtg gcaaattgtt cggtgacgag cctgccagg 120
gccactgtta ccctgatctg ccctggaaag gaagcagcag gcaatgtac cattcactgg 180
gtgtactcag gctcacagag cagagaatgg actaccacgg gaaacacact gttctgagg 240
gccgtgcagg tcaatgacac tggcactat ttgtgcttcc tggatgatca tctgggttggg 300
actgtgccct tgctggtggaa tgttccccca gaggagccca agctctcctg cttccggaaag 360
aacccccctt taaatgcctt ttgtgagtgg catccaagca gcactccctc tccaaccacg 420
aaggctgtga .tgtttgcaaa gaaaatcaac accaccaatg ggaagagtga cttccagggt 480
ccttgccagt attctcagca gctaaaaagc ttctcctgcg aggtggagat cctggagggt 540
gacaaagtgt accacatagt gtcactgtgc gttgcaaaca gtgtcggaaag caggtccagc 600
cacaatgttag tatttcagag tttaaaaatg gtgcagccgg atccacctgc caaccttgc 660
gtatcagcca tacctggaag cctcggttgc tcaaagttag ttggcaagac cctgagtcct 720
gggacccaag ttactacttg ttgcaattcg agcttcgata ccgacctgta tggtcaaaga 780
acgttcacgg tgtggccgct ccaggtggcc cagcatcaat gtgtcatcca tggatgccttgc 840
cgaggagtaa agcatgtggt gcaggtccga gggaggagg agtttgacat tggccagtg 900
agcaaattggt ccccgaggt cacaggcact cttggctag cagagccag gaccactccg 960
gcagggatcc cggggAACCC cacacagggtc tctgttgaag actatgacaa ccacgaggat 1020
cagtacggaa gttctacaga agcaacgagt gtcctcgccc cagtgcagg atcctcgcttgc 1080
atacccctgc ccacattcct gtagtgcggaa ggaagcctgg cgttggatt gcttcttgt 1140
gtcttcatca tcttgagact caagaagaaa tggaaagtac aggttgagaa ggaaagcaag 1200
acgacttctc ccccacccgtt tcccttggga ccgctgaagc cgaccccttgc cctgggttcct 1260
ctccctcaccc catcagggtc ccataacagc tctgggactg acaacaccgg aagccacagc 1320
tgcctgggttgc tcagggaccc acagtgcctt aatgacaaca gcaacagaga ctacttattc 1380
cccagataa 1389

```

<210> 10  
<211> 364  
<212> PRT  
<213> Rattus norvegicus

<400> 10

Met Leu Ala Val Gly Cys Thr Leu Leu Val Ala Leu Leu Ala Ala Pro  
1 5 10 15

Ala Val Ala Leu Val Leu Gly Ser Cys Arg Ala Leu Glu Val Ala Asn  
20 25 30

Gly Thr Val Thr Ser Leu Pro Gly Ala Thr Val Thr Leu Ile Cys Pro  
35 40 45

Gly Lys Glu Ala Ala Gly Asn Ala Thr Ile His Trp Val Tyr Ser Gly  
50 55 60

Ser Gln Ser Arg Glu Trp Thr Thr Gly Asn Thr Leu Val Leu Arg  
65 70 75 80

Ala Val Gln Val Asn Asp Thr Gly His Tyr Leu Cys Phe Leu Asp Asp  
85 90 95

His Leu Val Gly Thr Val Pro Leu Leu Val Asp Val Pro Pro Glu Glu  
100 105 110

Pro Lys Leu Ser Cys Phe Arg Lys Asn Pro Leu Val Asn Ala Phe Cys  
115 120 125

Glu Trp His Pro Ser Ser Thr Pro Ser Pro Thr Thr Lys Ala Val Met  
130 135 140

Phe Ala Lys Lys Ile Asn Thr Thr Asn Gly Lys Ser Asp Phe Gln Val  
145 150 155 160

Pro Cys Gln Tyr Ser Gln Gln Leu Lys Ser Phe Ser Cys Glu Val Glu  
165 170 175

Ile Leu Glu Gly Asp Lys Val Tyr His Ile Val Ser Leu Cys Val Ala  
180 185 190

Asn Ser Val Gly Ser Arg Ser Ser His Asn Val Val Phe Gln Ser Leu  
195 200 205

Lys Met Val Gln Pro Asp Pro Pro Ala Asn Leu Val Val Ser Ala Ile  
210 215 220

Pro Gly Ser Leu Val Gly Ser Lys Ser Val Gly Lys Thr Leu Ser Pro  
225 230 235 240

Gly Thr Gln Val Thr Thr Cys Cys Asn Ser Ser Phe Asp Thr Asp Leu  
245 250 255

Tyr Gly Gln Arg Thr Phe Thr Val Trp Pro Leu Gln Val Ala Gln His  
260 265 270

Gln Cys Val Ile His Asp Ala Leu Arg Gly Val Lys His Val Val Gln  
275 280 285

Val Arg Gly Lys Glu Glu Phe Asp Ile Gly Gln Trp Ser Lys Trp Ser  
290 295 300

Pro Glu Val Thr Gly Thr Pro Trp Leu Ala Glu Pro Arg Thr Thr Pro  
305 310 315 320

Ala Gly Ile Pro Gly Asn Pro Thr Gln Val Ser Val Glu Asp Tyr Asp  
325 330 335

Asn His Glu Asp Gln Tyr Gly Ser Ser Thr Glu Ala Thr Ser Val Leu  
340 345 350

Ala Pro Val Gln Gly Ser Ser Pro Ile Pro Leu Pro  
355 360

<210> 11  
<211> 1407  
<212> DNA  
<213> Human

<400> 11	
atgctggccg tcggctgcgc gctgctggct gccctgctgg ccgcgcgggg agcggcgctg	60
cccccaaggc gctgccctgc gcaggagggtg gcgagaggcg tgctgaccag tctgccagga	120
gacagcgtga ctctgacctg cccggggta gagccggaag acaatgccac tgttcactgg	180
gtgctcagga agccggctgc aggctcccac cccagcagat gggctggcat gggaaaggagg	240
ctgctgctga ggtcggtgca gctccacgac tctggaaact attcatgcta ccgggcccgc	300
cggccagctg ggactgtgca cttgctggtg gatgttcccc ccgaggagcc ccagctctcc	360
tgcttccgga agagccccct cagcaatgtt gtttgtgagt ggggtcctcg gagcacccca	420
tccctgacga caaaggctgt gctcttggtg aggaagtttc agaacagtcc ggccgaagac	480
ttccaggagc cgtgccagta ttcccaggag tcccagaagt tctcctgcca gtttagcagtc	540
ccggaggggag acagctttt ctacatagtg tccatgtgcg tcgcccagtag tgtcggagc	600
aagttcagca aaactcaaac ctttcagggt tggaaatct tgccagctga tccgcctgcc	660
aatcatcacag tcactgccgt ggccagaaac ccccgctggc tcagtgtcac ctggcaagac	720
cccccactcct ggaactcatc tttctacaga ctacggtttg agctcagata tcgggctgaa	780

cggtaaaaga cattcacaac atggatggtc aaggacctcc agcatcactg tgtcatccac	840
gacgccttgg a cggccttag gcacgtggtg cagcttcgtg cccaggagga gttcgggcaa	900
ggcgagtgg a cgagtggag cccggaggcc atgggcacgc ttggacaga atccaggagt	960
cctccagctg agaacgaggt gtccaccccc atgcaggcac ttactactaa taaagacgat	1020
gataatattc tcttcagaga ttctgcaa at gacacaagcc tcccgatgca agattcttct	1080
tca gttaccac tgcccacatt cctggttgct ggagggagcc tggccttcgg aacgctcctc	1140
tgcattgcca ttgttctgag gttcaagaag acgtggaagc tgcgggctct gaaggaaggc	1200
aagacaagca tgcacatccgccc gtactcttg gggcagctgg tcccgagag gcctcgaccc	1260
accccaagtgc ttgttctct catctccccca ccggtgtccc ccagcagcct ggggtctgac	1320
aatacctcga gccacaaccg accagatgcc agggacccac ggagcccta tgacatcagc	1380
aatacagact acttcttccc cagatag	1407

&lt;210&gt; 12

&lt;211&gt; 365

&lt;212&gt; PRT

&lt;213&gt; Human

&lt;400&gt; 12

Met Leu Ala Val Gly Cys Ala Leu Leu Ala Ala Leu Leu Ala Ala Pro			
1	5	10	15

Gly Ala Ala Leu Ala Pro Arg Arg Cys Pro Ala Gln Glu Val Ala Arg			
20	25	30	

Gly Val Leu Thr Ser Leu Pro Gly Asp Ser Val Thr Leu Thr Cys Pro			
35	40	45	

Gly Val Glu Pro Glu Asp Asn Ala Thr Val His Trp Val Leu Arg Lys			
50	55	60	

Pro Ala Ala Gly Ser His Pro Ser Arg Trp Ala Gly Met Gly Arg Arg			
65	70	75	80

Leu Leu Leu Arg Ser Val Gln Leu His Asp Ser Gly Asn Tyr Ser Cys			
85	90	95	

Tyr Arg Ala Gly Arg Pro Ala Gly Thr Val His Leu Leu Val Asp Val			
100	105	110	

Pro Pro Glu Glu Pro Gln Leu Ser Cys Phe Arg Lys Ser Pro Leu Ser			
115	120	125	

Asn Val Val Cys Glu Trp Gly Pro Arg Ser Thr Pro Ser Leu Thr Thr  
130 135 140

Lys Ala Val Leu Leu Val Arg Lys Phe Gln Asn Ser Pro Ala Glu Asp  
145 150 155 160

Phe Gln Glu Pro Cys Gln Tyr Ser Gln Glu Ser Gln Lys Phe Ser Cys  
165 170 175

Gln Leu Ala Val Pro Glu Gly Asp Ser Ser Phe Tyr Ile Val Ser Met  
180 185 190

Cys Val Ala Ser Ser Val Gly Ser Lys Phe Ser Lys Thr Gln Thr Phe  
195 200 205

Gln Gly Cys Gly Ile Leu Gln Pro Asp Pro Pro Ala Asn Ile Thr Val  
210 215 220

Thr Ala Val Ala Arg Asn Pro Arg Trp Leu Ser Val Thr Trp Gln Asp  
225 230 235 240

Pro His Ser Trp Asn Ser Ser Phe Tyr Arg Leu Arg Phe Glu Leu Arg  
245 250 255

Tyr Arg Ala Glu Arg Ser Lys Thr Phe Thr Thr Trp Met Val Lys Asp  
260 265 270

Leu Gln His His Cys Val Ile His Asp Ala Trp Ser Gly Leu Arg His  
275 280 285

Val Val Gln Leu Arg Ala Gln Glu Glu Phe Gly Gln Gly Glu Trp Ser  
290 295 300

Glu Trp Ser Pro Glu Ala Met Gly Thr Pro Trp Thr Glu Ser Arg Ser  
305 310 315 320

Pro Pro Ala Glu Asn Glu Val Ser Thr Pro Met Gln Ala Leu Thr Thr  
325 330 335

Asn Lys Asp Asp Asp Asn Ile Leu Phe Arg Asp Ser Ala Asn Ala Thr  
340 345 350

Ser Leu Pro Val Gln Asp Ser Ser Ser Val Pro Leu Pro  
355 360 365